

【CLAIMS】

1. A tap water temperature sensing type of light emitting apparatus, comprising:
- a power source (15) adapted to supply power;
- 5 a control unit (30) for sensing opening/closing state of the tap tube to control the power source (15) such that if the tap tube is opened, power supply is done and if the tap tube is closed, the power supply is stopped;
- a sensing unit (40) disposed around a portion where hot water and cool water meet for sensing the temperature of water in the tap tube; and
- 10 a light emitting unit (50) for producing different color lights in accordance with the water temperature read in the sensing unit (40).
2. A tap water temperature sensing type of light emitting apparatus according to claim 1, wherein the power source (15) comprises: a generator (10) having a magnetic turbine
- 15 (11) disposed at a tap end portion where water comes out and a coil (13) fixed around the magnetic turbine (11) with a result that the magnetic turbine (11) is rotated as the water drops from the tap end portion, thereby generating alternating current; and a rectifier (20) adapted to transform the alternating current generating from the generator

(10) to direct current.

3. A tap water temperature sensing type of light emitting apparatus according to claim 1
or 2, wherein the light emitting unit (50) is mounted around a discharge outlet of tap
5 water, the light emitting unit (50) being sealed with a transparent or semi-transparent
material.

4. A tap water temperature sensing type of light emitting apparatus according to claim 1
or 2, wherein the light emitting unit (50) further comprises a light transmitting unit (60)
10 that is made of optical fibers for transmitting the light emitted from the light emitting
unit (50) to the inside of the discharge outlet of the tap water.

5. A tap water temperature sensing type of light emitting apparatus according to claim 1
or 2, wherein the control unit (30) comprises a spring (33) adapted to be fixed to the tap
15 tube at one end thereof, a magnetic valve (31) disposed at the other end of the spring
(33), and a reed relay (35) mounted on an outer surface of the tap tube in such a manner
as to be turned on and off to control the power source (15) when the water flows through

the tap tube and when there is no water running therethrough to thereby move the magnetic valve (31) forwardly and backwardly.

6. A tap water temperature sensing type of light emitting apparatus according to claim 1
5 or 2, wherein the light emitting unit (50) comprises two or more light emitting elements that generate different color lights from each other.

7. A tap water temperature sensing type of light emitting apparatus according to claim 1
or 2, wherein the discharge outlet of the tap water is connected to a shower hose (70)
10 that is made of transparent or semi-transparent material and has high reflection on an outer surface thereof and low reflection on an inner surface thereof.

8. A tap water temperature sensing type of light emitting apparatus according to any one of claims 1 and 2, wherein the sensing unit (40) comprises a common electrode (k2)
15 extended to a portion where hot water and cool water meet in the tap tube at one end thereof and connected to power at the other end thereof and first and second electrodes (k1 and k3) placed at left and right sides of the common electrode (k2) in such a manner

as to be submerged partially in the tap water, and the light emitting unit (50) comprises a high temperature driver (57) connected to an end of the first electrode (k1) that is not submerged in the tap water, a low temperature driver (55) connected to an end of the second electrode (k3) that is not submerged in the tap water, a high temperature light emitting element connected to the high temperature driver (57) for emitting a light when the tap water is more than a predetermined temperature (T2), and a low temperature light emitting element connected to the low temperature driver (55) for emitting a light when the tap water is less than a predetermined temperature (T1).

9. A tap water temperature sensing type of light emitting apparatus according to claim 8, wherein the high temperature driver (57) comprises an npn transistor (Q1) and a variable resistance (R3) connected to a base of the npn transistor (Q1) for controlling the voltage of the base of the npn transistor (Q1), the low temperature driver (55) comprises a pnp transistor (Q2) and a variable resistance (R4) connected to a base of the pnp transistor (Q2) for controlling the voltage of the base of the pnp transistor (Q2), the high temperature emitting element is a light emitting diode (L1) connected to a collector of the npn transistor (Q1) of the high temperature driver (57), and the low temperature

emitting element is a light emitting diode (L2) connected to an emitter of the pnp transistor (Q2) of the low temperature driver (55), the light emitting diode (L2) emitting the different color light from the light emitting diode (L1).

- 5 10. A tap water temperature sensing type of light emitting apparatus according to claim 8, wherein the common electrode (k2) has a higher submersion height than the first and second electrodes (k1 and k3).
11. A tap water temperature sensing type of light emitting apparatus according to claim 8, wherein the common electrode (k2), the first electrode (k1), and the second electrode
- 10 (k3) of the sensing unit (40) are formed of carbon or stainless steel.